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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eyal Benoudiz

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10/23/2006

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EXAMINER

KENDALL, CHUCK O

ART UNIT

PAPER NUMBER

2192

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,055

Applicant(s)

BENOUDIZ, EYAL

Examiner

Chuck O. Kendall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14 - 24 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14 - 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. This is in response to Application filed 08/10/2006.
2. Claim 13 has been cancelled and claims 1 – 12 and 14 – 24, have been amended and are still pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1 – 12 and 14 – 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hines US2003/0028858 A1.

Regarding claim 1, Hines anticipates a debugger for visual debugging of declarative language encapsulated constraint system, comprising:

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a collector operable to collect a plurality of generation events during a test generation process (see [0349] for event based debugging and collecting event traces) said collector further collecting from said test generation process a plurality of generation entities said generation entities including fields ([0422], see 3606 and 3604 for event generator and event table), representative of at least one data structure or variable, and constraints for defining relationships between respective fields, wherein said generation corresponds to generation decisions executing during said test generation process to apply said constraints to said fields;

a graphical user interface operable to graphically represent and concurrently display said collected generation entities and corresponding ones of events collected responsive to said generation decisions (see [0353] and [0358] which shows *Event based debugging and visualization tools* using an automated space/time graph diagram and *providing a visual representation of events*, also see [0396] for “*Space/time diagrams are also often employed as the user display in concurrent program debugging tool*”).

Regarding claim 2, the debugger of claim 1, wherein said collected generation entities and corresponding ones of said collected generation events are displayed on said graphical user interface in a two dimensional chart (see [0402] which discloses, “Abstraction is typically applied across two dimensions—events and processes”, also see FIG. 33 and FIG. 40).

Regarding claim 3, the debugger of claim 2, wherein said generation entities are displayed on a first dimension of said chart and a second dimension represents said generation decision in a linked sequence said generation events being displayed in alignment with their corresponding generation entities (see [0402] which discloses, “Abstraction is typically applied across two dimensions—events and processes”, also see first and second compound events in [0402] which forms part of the graph, and see FIG. 33 and FIG. 40 and all associated text).

Regarding claim 4, the debugger of claim 1, further comprising a data browser for interactive selection of said generation entities to be viewed (see [0358], see gives visual representation for event orderings, and see “the entities can also represent any entity that generates events in a sequential fashion”, also see [0501] which shows selecting using a GUI and generation of an event).

Regarding claim 5, the debugger of claim 1, further comprising:
a step tree for displaying a sequence of steps performed by said test generation process (see [0424] for cluster hierarchies and also see FIG. 37).

Regarding claim 6, the debugger of claim 1, further comprising:
an event browser for displaying said generation events (see [0358], see gives visual representation for event orderings).

Regarding claim 7, the debugger of claim 1, further comprising:

an order browser for displaying generation field order decisions (see, [0355] for order of events and see [0358], see gives visual representation for event orderings, Examiner interprets this to have equivalent function with claimed limitations).

Regarding claim 8, Hines anticipates a method for visual debugging of a constraint system, said constraint system being encapsulated in a declarative language, comprising:

concurrently displaying (0396) indicia indicative of relationship between a plurality of generation events collected [0403] during a generation process constraint resolution of said constraint system from a generator, and a plurality of generation entities comprising fields, representative of at least one data structure or variable and constraints for defining relationships between respective fields, wherein an order of execution of said generation entities is also graphically displayed, and debugging the constraint system by determining responsive to said displayed relationships one of said generation events to identify therefrom a constraint that remaining unresolved for a corresponding one of said fields (see [0400], shows graphical displays used during event based debugging which present the user information about distributed execution, also see [0402], which further discloses the diagram having a plurality of events and disclosing a representation of the events and process using and event abstraction which represents sequences of events as single entities, and also [0403], shows collecting the events, also see [0422], for event generation and collections).

Regarding claim 9, the method of claim 8, further comprising:
viewing a plurality of generation events sequentially from a selected event ([0401] – [0402], shows graphical diagrams and event abstraction representing sequences).

Regarding claim 10, the method of claim 9, wherein said sequence is displayed forward from said selected event (see FIG. 12 A, shows the queue depth of the sequence also see all associated text).

Regarding claim 11, the method of claim 8, wherein said sequence is displayed backward from said selected event (see [00295] – [00296], shows an address book mode which includes a lookup mode with triggers (events) which can go forward and backwards, see table, as interpreted by Examiner).

Regarding claim 12, a method for displaying events of a generation process to a user for debugging the generation process, comprising:

extracting a sequence of events from a constraint resolution procedure of the generation process wherein constraints define relationships between fields representative of at least one data structure or variable said constraint resolution procedure determining an order in which said constraints are applied in the generation process, wherein said order in which said constraints are applied is determined from an

order of said sequence events; (see [0145], which shows the coordinator allows debugging and includes constraints, also constraint resolution is further discussed in [0167- 0168], see *corrective actions*); and

displaying at least a portion of said sequence of events to the user in a visual display, concurrently with a representation of at least one generated field from at least one event (see [0353] and [0358] which shows *Event based debugging* and *visualization tools* using an automated space/time graph diagram and *providing a visual representation of events*, and also in [0098], Hines shows the system provides an *encapsulating* formalism for coordination and for *generated field* see “an entity that generates events in a sequential fashion” [0358]).

Regarding claim 14, the method of claim 12, wherein said visual display includes a representation of at least one constraint from at least one event ([0499] see events and coordinator constraints) and [0353] and [0358] which shows *Event based debugging* and *visualization tools* using an automated space/time graph diagram and *providing a visual representation of events*).

Regarding claim 15, the method of claim 12, wherein said visual display includes a representation of a relationship at least of said events and a generation entity ([0358], see “entities can also represent an entity that generates events in a sequential fashion”).

Regarding claim 16, the method of claim 12, wherein said visual display includes at least one type of information displayed as a result of a selection by the user ([0006], see selective focus).

Regarding claim 17, Hines anticipates a debugger for visualizing a generation process, comprising:

an analyzer for analyzing resolutions of constraints for defining relation ships between respective fields representative of at least one data structure or variable and said constraints being applied during the generation process to extract a sequence of events from the generation process (see [0145], which shows the coordinator allows debugging and includes constraints, also constraint resolution is further discussed in [0167- 0168], see *corrective actions*) said constraint system being encapsulated in a declarative language, said sequence of events occurring in an order corresponding to an order in which constraint resolution decision were made in the generation process; and

a visual display operable to concurrently displaying information related to at least one of a-field, on which a constraint was applied, information relating to how a constraint was applied and information related to said order in which said constraint resolution decision were made (see [0353] and [0358] which shows *Event based debugging and visualization tools* using an automated space/time graph diagram and *providing a visual representation of events*, and also in [0098], Hines shows the system provides an *encapsulating* formalism for coordination).

Regarding claim 18, the generation debugger of claim 17, wherein said visual display further displays information related to an event collected during static analysis ([0144], see coordinator and static analysis).

Regarding claim 19, the generation debugger of claim 17, wherein said visual display further displays information related to an event collected during program execution ([0399], also see [0422] see event sensor 3602).

Regarding claim 20, the generation debugger of claim 17, wherein said information is represented with at least one icon and wherein said visual display further displays information when said icon is selected ([0492], see “visual cue, or icon”).

Regarding claim 21, the generation debugger of claim 17, wherein said visual display further displays ordering information for a plurality of fields ([0484], see ordered event displays).

Regarding claim 22, the generation debugger of claim 21, wherein said visual display further displays ordering information based on static analysis ([0144], see coordinator and static analysis).

Regarding claim 23, the generation debugger of claim 21, wherein said visual display further displays ordering information based on order computed dynamically ([0268] – [0270]).

Regarding claim 24, the generation debugger of claim 21, wherein said visual display further displays ordering information related to a group of fields selected through said visual display ([0422]).

Response to Arguments

8. Applicant's arguments with respect to claims 1 – 12 and 14 – 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-272-3698. The examiner can normally be reached on 10:00 am - 6:30pm.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-2723698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-2723695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ck.



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